OFFICE OF MANNED SPACE FLIGHT
PROGRAM DIRECTIVE

M-D MA 1400.095
(Project)

DATE
5 AUG 1968

APOLLO PROGRAM DIRECTIVE NO. 33A

TO: DISTRIBUTION

~~FROM:~~ APOLLO PROGRAM DIRECTOR

SUBJECT: Center Responsibilities in the Apollo Program

OFFICE OF PRIME RESPONSIBILITY: MAP

I. PURPOSE

The purpose of this Directive is to assign responsibility and functions and define inter-Center relationships for the conduct of the Apollo Program.

II. SCOPE

This Directive assigns responsibilities and functions to MSF Centers for accomplishment of the Apollo Program in amplification of and in consonance with NMI 1142.1 Functions and Authority - Manned Spacecraft Center, NMI 1142.3 Functions and Authority - George C. Marshall Space Flight Center, and NMI 1142.2 Functions and Authority - John F. Kennedy Space Center. 7 Dec 64 (cancels 2-2-98, 7 Dec 64 + 7 Jan 65)

III. RESPONSIBILITY

A. The Director of the Manned Spacecraft Center is responsible for design, development, fabrication, qualification, acceptance test and delivery of Apollo spacecraft; associated ground support equipment and assigned experiments; for the planning of all Apollo Missions; for the control of the flight phase of Apollo Missions including the development of ground equipment necessary for mission control and not provided by other centers in the execution of their missions; for the selection, training and assignment of flight crews; for the development of software as needed for spacecraft guidance, checkout, and mission control; for establishing prelaunch requirements for test, checkout and inspection of Apollo spacecraft; and for the planning and implementation of a lunar science program to support the Apollo Program.

B. The Director of the George C. Marshall Space Flight Center is responsible for the design, development, fabrication, qualification, acceptance test and delivery of the Saturn launch vehicles including engines, associated ground support equipment and assigned experiments; providing mission planning data from the standpoint of overall vehicle performance; providing launch vehicle data and software for launch vehicle guidance and checkout; for establishing prelaunch requirements for test, checkout and inspection of Saturn launch vehicles; and supporting launch and flight operations as requested by KSC and MSC.

C. The Director of the John F. Kennedy Space Center is responsible for development and operation of launch and industrial facilities and associated ground support equipment required to support the Apollo Program and the assembly, test, inspection, checkout and launch of Apollo-Saturn space vehicles at KSC.

D. Center Directors will retain ultimate responsibility for Apollo Program functions delegated within the Center, and will supervise their performance. Significant changes in delegation of functions will be discussed with the Apollo Program Director prior to implementation.

IV. FUNCTIONS

A. Manned Spacecraft Center

The Manned Spacecraft Center is assigned the following functions for the Apollo Program:

1. Hardware

a. Providing for the detailed specifications, design, manufacture, checkout, test, reliability and quality, qualification, and acceptance of MSC developed hardware. This does not include the test and checkout functions accomplished at the launch site by KSC.

b. Developing and delivering to KSC spacecraft which has been qualified for flight along with associated software, data and support equipment.

c. Providing for the detailed specifications, design, development, fabrication, qualification, acceptance test and delivery of experiments flight hardware and associated specialized ground equipment for those experiments approved by the Manned Space Flight Experiments Board and assigned by the Apollo Program Director.

d. Providing logistic support planning and implementation at factory, test and launch sites for MSC developed hardware.

e. Controlling receipt and stowage of flight crew personal equipment at KSC which is scheduled for flight and providing to KSC a list of equipment which is considered flight crew personal equipment.

2. Configuration Control

a. Establishing and controlling configuration of spacecraft hardware, associated software and support equipment (designed or provided by MSC) at each stage of preparation or test in the factory, test or launch site, including approval of changes at KSC.

b. Providing and maintaining a list of acceptable items and materials that may enter the spacecraft for checkout and for flight.

3. Test and Checkout

a. Establishing and maintaining test and checkout requirements and test and checkout specifications and criteria for factory or test site acceptance and launch site preparation of MSC developed hardware (including Ground Support Equipment and software).

b. Providing test and checkout requirements and test and checkout specifications and criteria for launch site preparation of MSC developed hardware, software and Ground Support Equipment.

c. Reviewing factory, test site and launch site test requirements and test and checkout plans and procedures as necessary to assure that adequate testing is being accomplished without unnecessary overlap and duplication between testing conducted at different locations.

d. Providing written approval of KSC test and checkout plans in consonance with paragraphs IV.A.3b and IV.A.3c.

e. Providing Center approved factory or test site test and checkout procedures to KSC for use as a baseline in the development of similar procedures required at the launch site.

f. Reviewing at the option of MSC, the adequacy of KSC test procedures at the launch site.

g. Providing requirements and criteria to KSC for assuring flight readiness of experiments flight hardware, unless KSC and MSC on the basis of written agreement for a specific experiment make other arrangements for flight readiness determination.

h. Determining functional performance and flight readiness of flight hardware closed out at the factory or test site and not accessible for inspection or not included in test and checkout requirements for evaluation of functional performance at KSC.

i. Providing such technical assistance or data as may be required by KSC in preparation of hardware for flight.

j. Assuring that MSC personnel participating in KSC tests are responsive to KSC direction during conduct of the tests and attend pre-test briefings and participate in training exercises as required by KSC in accordance with responsibilities outlined herein.

k. Providing an assessment of flight readiness of the spacecraft and associated software at the Flight Readiness Review in accordance with Apollo Program Directives.

4. Reliability and Quality Assurance

   a. Providing quality control requirements and inspection criteria for MSC developed hardware for use at the factory, test site and launch site.

   b. Conducting audits to evaluate contractor factory and test site performance in accordance with MSC quality control requirements and inspection criteria for MSC developed hardware, and participating at the option of MSC in audits conducted by KSC at the launch site.

   c. Determining corrective action and disposition of MSC developed hardware which fails, malfunctions or performs outside the performance limits contained in test and checkout specifications and criteria during checkout at KSC. This responsibility does not include routine trouble-shooting or maintenance of MSC developed ground support equipment operated by KSC.

5. Systems Engineering

   Providing MSC technical representation on design and operations inter-Center panels or working groups as established by Apollo Program Directives.

6. Operations

   a. Developing flight techniques for mission control and hardware and software for the Mission Control Center.

   b. Developing mission objectives, plans and rules to support Apollo mission assignments.

   c. Conducting flight operations.

   d. Obtaining from KSC the operational requirements pertaining to checkout and launch which need to be incorporated into MSC designed hardware.

   e. Planning jointly with the Department of Defense the provision of recovery support.

   f. Providing input to and comment on KSC launch rules.

   g. Identifying MSC operational support requirements according to approved procedures and evaluating support implementation of said requirements.

7. Flight Crew

a. Providing trained flight crews and personal equipment for manned missions.

b. Directing all astronaut activities except during the time they are participating in KSC flight hardware tests.

c. Developing and operating flight crew simulators and training equipment at MSC and KSC.

8. Science

a. Planning and implementation of a lunar science program to support Apollo, including site selection, lunar science operations, the Lunar Receiving Laboratory operation and lunar sample analysis.

9. Management

This section contains general management responsibilities for the conduct of the Apollo program at MSC as well as some specific management requirements which need to be highlighted.

General

a. Assuring that Apollo program requirements for manpower or for institutional support from other elements of MSC are properly conveyed to those elements and that Apollo program institutional support requirements are reflected in Center resource requirements plans, schedules, and budgets.

b. Assuring that Apollo program requirements for institutional support are met on an effective and timely basis.

c. Developing and operating Center facilities required for the Apollo Program.

d. Developing and implementing adequate security procedures.

e. Establishing detailed schedules (Levels 2, 3 and 4) for MSC hardware, software and associated equipment and operations activities consistent with the basic schedules (Level 1) approved by the Director, Apollo Program, and the Director, Mission Operations.

f. Providing contract authority for KSC control of spacecraft contractor's test and checkout activities at KSC through a supplemental contract under KSC administration.

Medical

Medical support for the Apollo program will be provided in accordance with NMI 8900.1. In addition, the following specific requirements will be met on the Apollo program.

a. Providing for the medical surveillance and support of the astronauts during all phases of the Apollo Program at any location including test and checkout operations.

b. Providing for the evaluation of medical data obtained during manned tests, to insure that the interpretation of such data regarding the acceptability of equipment performance is properly reflected in post flight mission reports.

c. Providing for the development and implementation of medical disaster plans associated with the test of Apollo hardware at MSC.

Safety

Safety activities in the Apollo program will be conducted in accordance with instructions provided by the Apollo Program Director and directives issued by the Manned Space Flight and NASA Safety Directors. In addition the following specific requirements will be met on the Apollo program.

a. Providing written approval of KSC criteria for determining hazardous operations at the launch site.

b. Reviewing and approving any KSC test and checkout procedure in which the flight crew participates.

B. George C. Marshall Space Flight Center

The George C. Marshall Space Flight Center is assigned the following functions for the Apollo Program.

1. Hardware

   a. Providing for the detailed specifications, design, manufacture, checkout, test, reliability and quality, qualification and acceptance of MSFC developed hardware. This does not include the test and checkout functions accomplished at the launch site by KSC.

   b. Developing and delivering to KSC launch vehicles which have been qualified for flight along with associated software, data and support equipment.

   c. Providing for the detailed specifications, design, development, fabrication, qualification, acceptance test and delivery of experiments flight hardware and associated specialized ground equipment for those experiments approved by the Manned Space Flight Experiments Board and assigned by the Apollo Program Director.

   d. Providing logistic support planning and implementation at factory, test and launch sites for MSFC controlled hardware.

2. Configuration Control

   a. Establishing and controlling configuration of launch vehicle hardware, associated software and support equipment (designed or provided by MSFC) at each stage of preparation or test in the factory, test or launch site, including approval of changes at KSC.

   b. Providing criteria to KSC for controlling tools, equipment and materials that enter and leave the launch vehicle stages and instrument unit during operations at KSC.

3. Test and Checkout

   a. Establishing and maintaining test and checkout requirements and test and checkout specifications and criteria for factory or test site acceptance and launch site preparation of MSFC developed hardware (including Ground Support Equipment and software).

   b. Providing test and checkout requirements and test and checkout specifications and criteria for launch site preparation of MSFC developed hardware, software and Ground Support Equipment.

   c. Reviewing factory, test site and launch site test requirements and test and checkout plans and procedures as necessary to assure that adequate testing is being accomplished.

   d. Providing written approval of KSC test and checkout plans in consonance with paragraphs IV.B.3b and IV.B.3c.

   e. Providing Center approved factory or test site test and checkout procedures to KSC for use as a baseline in the development of similar procedures required at the launch site.

f. Reviewing at the option of MSFC, the adequacy of KSC test procedures at the launch site.

g. Providing requirements and criteria to KSC for assuring flight readiness of experiments flight hardware, unless KSC and MSFC on the basis of written agreement for a specific experiment make other arrangements for flight readiness determination.

h. Determining functional performance and flight readiness of flight hardware closed out at the factory or test site and not accessible for inspection or not included in test and checkout requirements for evaluation of functional performance at KSC.

i. Providing such technical assistance or data as may be required by KSC in preparation of hardware for flight.

j. Assuring that MSFC personnel participating in KSC tests are responsive to KSC direction during conduct of the tests and attend pre-test briefings and participate in training exercises as required by KSC in accordance with responsibilities outlined herein.

k. Providing an assessment of flight readiness of the launch vehicle and associated software at the Flight Readiness Review in accordance with Apollo Program Directives.

4. Reliability and Quality Assurance

a. Providing quality control requirements and inspection criteria for MSFC developed hardware for use at the factory, test site and launch site.

b. Conducting audits to evaluate contractor factory and test site performance in accordance with MSFC quality control requirements and inspection criteria for MSFC developed hardware, and participating at the option of MSFC in audits conducted by KSC at the launch site.

c. Determining corrective action and disposition of MSFC developed hardware which fails, malfunctions, or performs outside the performance limits contained in test and checkout specifications and criteria during checkout at KSC. This responsibility does not include routine trouble-shooting or maintenance of MSFC-developed ground support equipment operated by KSC.

5. Systems Engineering

a. Providing MSFC technical representation on design and operations inter-Center panels or working groups as established by Apollo Program Directives.

b. Providing the overall integrated space vehicle systems analysis and criteria for operational requirements and limitations for handling, checkout, launch and flight as required by MSFC, MSC and KSC.

c. Operating the Manned Space Flight Interface Documentation Repository.

6. Operations

a. Developing mission objectives and plans to support Apollo mission assignments.

b. Providing real time mission support as requested by MSC and KSC both on site and at Huntsville.

c. Providing input to and comment on KSC launch and MSC flight mission rules.

d. Obtaining from KSC the operational requirements pertaining to checkout and launch which need to be incorporated into MSFC designed hardware.

e. Identifying MSFC operational support requirements according to approved procedures and evaluating support implementation of said requirements.

7. Flight Crew

Providing instructions and material for training and familiarization of flight crews with the Saturn vehicle.

8. Science

None

9. Management

This section contains general management responsibilities for the conduct of the Apollo program at MSFC as well as some specific management requirements which need to be highlighted.

General

a. Assuring that Apollo program requirements for manpower or for institutional support from other elements of MSFCare properly conveyed to those elements and that Apollo program institutional support requirements are reflected in Center resource requirements plans, schedules, and budgets.

b. Assuring that Apollo program requirements for institutional support are met on an effective and timely basis.

c. Developing and operating Center facilities required for the Apollo Program.

d. Developing and implementing adequate security procedures.

e. Establishing detailed schedules (Levels 2, 3 and 4) for MSFC hardware, software, and associated equipment consistent with the basic schedules (Level 1) approved by the Apollo Program Director.

f. Providing liquid hydrogen management for MSFC and KSC.

g. Providing contract authority for KSC control of launch vehicle contractor's test and checkout activities at KSC through a supplemental contract under KSC administration.

Medical

Medical support for the Apollo program will be provided in accordance with NMI 8900.1. In addition, the following specific requirement will be met on the Apollo program.

a. Providing for the development and implementation of medical disaster plans associated with the test of Saturn hardware at MSFC.

Safety

Safety activities in the Apollo program will be conducted in accordance with instruction provided by the Apollo Program Director and directives issued by the Manned Space Flight and NASA Safety Directors. In addition the following specific requirement will be met on the Apollo program.

a. Providing written approval on KSC criteria for determining hazardous operations at the launch site.

C. John F. Kennedy Space Center

The John F. Kennedy Space Center is assigned the following functions for the Apollo Program.

1. Hardware

a. Providing for detailed specifications, design, manufacture, checkout, test, reliability and quality, qualification and acceptance of KSC developed hardware.

b. Developing and delivering qualified ground support equipment associated with launch facilities and not provided by MSC or MSFC.

c. Developing and operating ground communications, computation, and instrumentation systems and equipment for the conduct of launch operations.

d. Taking measures to protect flight hardware and associated Ground Support Equipment from contamination, corrosion or damage which may result from environment, housekeeping, procedure or human error and reporting incidents to MSC and MSFC as appropriate.

e. Providing logistics support planning and implementation at the factory test or at KSC for KSC developed hardware.

2. Configuration Control

a. Establishing and controlling configuration of KSC developed launch facilities and ground support equipment at each stage of preparation or test at the factory, test site or at KSC.

b. Maintaining configuration control of MSC and MSFC developed hardware and software after delivery to KSC in accordance with the configuration requirements established by MSC and MSFC. Assuring that prior approval is secured from MSC and MSFC before any changes in configuration are made in spacecraft, launch vehicle, or associated GSE furnished by MSC or MSFC.

c. Securing, after the flight readiness test, the prior approval of MSC or MSFC for the replacement of failed parts.

d. Controlling everything that enters and leaves the spacecraft during checkout at KSC in accordance with the MSC list of acceptable items and materials that may be taken into the spacecraft for checkout and for flight.

e. Controlling tools, equipment and materials that enter and leave the launch vehicle stages and instrument unit during operations at KSC in accordance with criteria provided by MSFC.

3 Logistics Management

a. Provide total logistics support planning and management for all KSC equipment. Plan for the utilization at KSC of equipment provided by other design cognizant centers, using the inter-center coordinated support planning provided by those centers.

b. Provide logistics products and services to meet the valid intent of NHB 7500.1 for KSC designed equipment. Utilize logistics products and services provided by other centers to support equipment under their design cognizance, unless stipulated otherwise in inter-center logistics agreements.

c. Receive, store, issue and dispose of spare parts for all Apollo Program equipment operated at KSC in accordance with inter-center coordinated plans and directions from the design cognizant centers.

d. Provide reports of logistics requirements, status and spares consumption as required.

e. Establish, implement and control a logistics discrepancy reporting system.

4. Test and Checkout

a. Conducting the assembly, checkout, and launch of flight hardware for Apollo missions and assembly, checkout and operation of required ground support equipment.

b. Providing control of all personnel participating in test and checkout activities, including representatives from MSC and MSFC, and assuring that personnel attend pre-test briefings and participate in training exercises as necessary to assure personnel safety and proper conduct of the tests.

c. Providing requirements, specifications and criteria, and procedures for test and checkout of KSC developed support equipment whose performance must be verified for each launch.

d. Providing test and checkout plans in accordance with MSC and MSFC test and checkout requirements plus any additional KSC test requirements necessary to verify launch facility, Manned Space Flight Network and launch crew readiness or to satisfy range and safety requirements.

e. Securing MSC and MSFC written approval on test and checkout plans and changes thereto before the plans are approved or implemented.

f. Developing and providing to MSC or MSFC test and checkout procedures adapted to the KSC environment using as a baseline the development center approved factory test and checkout procedure

g. Making final determination that test and checkout procedures are adequate, safe and in accordance with MSC and MSFC test and checkout requirements and test and checkout specifications and criteria.

h. Obtaining approval on deviations and waivers from MSC and MSFC concerning test and checkout requirements, test and checkout specifications and criteria and inspection criteria when unable to meet requirements.

i. Determining functional performance and flight readiness of flight hardware and software in accordance with test and checkout requirements and test and checkout specifications and criteria provided by MSC and MSFC except for that which is closed out at the factory and not accessible for inspection or not included in test and checkout requirements for evaluation of functional performance at KSC.

j. Determining flight readiness of equipment associated with inflight experiments in accordance with MSC or MSFC (as appropriate) specifications and criteria unless specifically excluded by written agreement with MSC or MSFC.

k. Controlling receipt and storage, and assuring flight readiness of all Government Furnished Equipment, other than flight crew personal equipment, which is scheduled for flight and which is not processed to KSC through a contractor responsible to KSC.

l. Providing routine trouble shooting and maintenance for MSC and MSFC developed equipment in accordance with MSC and MSFC requirements, specifications and criteria.

m. Providing an assessment of the flight readiness of the launch complex, flight hardware and software at the Flight Readiness Review in accordance with Apollo Program Directives.

5. Reliability and Quality Assurance

a. Providing quality control requirements and inspection criteria for KSC developed hardware for use at the factory, test site and KSC.

b. Conducting audits to evaluate contractor factory and test site performance in accordance with KSC quality control requirements and inspection criteria for KSC developed hardware.

c. Determining corrective action and disposition of KSC developed hardware which fails, malfunctions, or performs outside the performance limits contained in test and checkout specifications and criteria during checkout at KSC.

d. Generating approval from the appropriate development center (MSC or MSFC) to disassemble or open any flight hardware closed out at a factory or test site.

h. Advising MSC or MSFC of any problem arising during prelaunch preparation concerning flight worthiness of flight hardware.

i. Conducting failure analysis as required by MSC and MSFC.

j. Participating in MSC and MSFC flight hardware acceptance reviews and providing recommendations to MSC or MSFC and the Apollo Program Director, concerning the acceptance of the hardware for shipment to KSC.

6. Systems Engineering

Providing KSC representation on design and operations inter-Center panels or working groups as established by Apollo Program Directives.

7. Operations

a. Identifying KSC operational support requirements according to approved procedures and evaluating implementation of support planning.

b. Providing data to MSC and MSFC in accordance with approved Program Support Requirements Documents.

c. Conducting launch operations.

d. Developing launch plans and rules.

8. Flight Crew

Coordinating and directing astronaut activities during the time they are actively participating in KSC tests of flight hardware except that the flight crew may take any action necessary for their safety.

9. Science

None

10. Management

This section contains general management responsibilities for the conduct of the Apollo program at KSC as well as some specific management requirements which need to be highlighted.

General

a. Assuring that Apollo program requirements for manpower or for institutional support from other elements of KSC are

properly conveyed to those elements and that Apollo program institutional support requirements are reflected in Center resource requirements plans, schedules, and budgets.

b. Assuring that Apollo program requirements for institutional support are met on an effective and timely basis.

c. Providing control of all activities of Apollo contractors at KSC other than those directly associated with astronaut training.

d. Developing and operating Center facilities required for the Apollo Program.

e. Developing and implementing adequate security procedures.

f. Establishing detailed schedules (Levels 2, 3 and 4) for KSC hardware, software and associated equipment consistent with the basic schedules (Level 1) approved by the Director, Apollo Program and the Director, Mission Operations.

Medical

Medical support for the Apollo program will be provided in accordance with NMI 8900.1. In addition, the following specific requirement will be met on the Apollo program.

a. Providing for the development and implementation of medical disaster plans associated with the assembly, checkout and prelaunch operations of Apollo flight hardware at KSC.

Safety

Safety activities in the Apollo program will be conducted in accordance with instructions provided by the Apollo Program Director and directives issued by the Manned Space Flight and NASA Safety Directors. In addition the following specific requirements will be met on the Apollo program.

a. Pefforming as the NASA single point of responsibility for safety in the Merritt Island and Cape Kennedy area and for NASA range safety inputs to the Eastern Test Range.

b. Developing criteria for determining hazardous operations at the launch site and securing written approval of MSC and MSFC.

V. PRECEDENCE

This Directive takes precedence over any inter-Center agreements on Apollo program responsibilities.

VI. CONCURRENCE

This Program Directive has been reviewed and concurred in by the Associate Administrator for Manned Space Flight and the Associate Administrator for Organization and Management. Any proposed substantive changes in the responsibilities defined in this document will be submitted for review and concurrence in the same manner.

a. Performing as the NASA single point of responsibility for safety in the Merritt Island and Cape Kennedy area and for NASA range safety inputs to the Eastern Test Range.

b. Developing criteria for determining hazardous operations at the launch site and securing written approval of MSC and MSFC.

V. PRECEDENCE

This Directive takes precedence over any inter-Center agreements on Apollo program responsibilities.

VI. CONCURRENCE

This Program Directive has been reviewed and concurred in by the Associate Administrator for Manned Space Flight and the Associate Administrator for Organization and Management. Any proposed substantive changes in the responsibilities defined in this document will be submitted for review and concurrence in the same manner.

PLEASE REPLACE PAGES 14, 15 AND 16 OF APOLLO PROGRAM DIRECTIVE NO. 33A WITH THE ATTACHED THREE PAGES.

d. Generating approval from the appropriate development center (MSC or MSFC) to disassemble or open any flight hardware closed out at a factory or test site.

e. Securing MSC and MSFC written approval of quality control plans insofar as development center responsibilities are concerned before the plans are approved or implemented.

f. Conducting quality control inspections and audits of contractor activities at KSC and inviting MSC and MSFC participation as applicable.

g. Obtaining approval from the appropriate development center (MSC or MSFC) to disassemble or open any flight hardware closed out at a factory or test site.

h. Advising MSC or MSFC of any problem arising during prelaunch preparation concerning flight worthiness of flight hardware.

i. Conducting failure analysis as required by MSC and MSFC.

j. Participating in MSC and MSFC flight hardware acceptance reviews and providing recommendations to MSC or MSFC and the Apollo Program Director, concerning the acceptance of the hardware for shipment to KSC.

6. Systems Engineering

Providing KSC representation on design and operations inter-Center panels or working groups as established by Apollo Program Directives.

7. Operations

a. Identifying KSC operational support requirements according to approved procedures and evaluating implementation of support planning.

b. Providing data to MSC and MSFC in accordance with approved Program Support Requirements Documents.

c. Conducting launch operations.

d. Developing launch plans and rules.

8. Flight Crew

Coordinating and directing astronaut activities during the time they are actively participating in KSC tests of flight hardware except that the flight crew may take any action necessary for their safety.

9. Science

None

10. Management

This section contains general management responsibilities for the conduct of the Apollo program at KSC as well as some specific management requirements which need to be highlighted.

General

a. Assuring that Apollo program requirements for manpower or for institutional support from other elements of KSC are properly conveyed to those elements and that Apollo program institutional support requirements are reflected in Center resource requirements plans, schedules, and budgets.

b. Assuring that Apollo program requirements for institutional support are met on an effective and timely basis.

c. Providing control of all activities of Apollo contractors at KSC other than those directly associated with astronaut training.

d. Developing and operating Center facilities required for the Apollo Program.

e. Developing and implementing adequate security procedures.

f. Establishing detailed schedules (Levels 2, 3 and 4) for KSC hardware, software and associated equipment consistent with the basic schedules (Level 1) approved by the Director, Apollo Program and the Director, Mission Operations.

Medical

Medical support for the Apollo program will be provided in accordance with NMI 8900.1. In addition, the following specific requirement will be met on the Apollo program.

a. Providing for the development and implementation of medical disaster plans associated with the assembly, checkout and prelaunch operations of Apollo flight hardware at KSC.

Safety

Safety activities in the Apollo program will be conducted in accordance with instructions provided by the Apollo Program Director and directives issued by the Manned Space Flight and NASA Safety Directors. In addition the following specific requirements will be met on the Apollo program.

a. Performing as the NASA single point of responsibility for safety in the Merritt Island and Cape Kennedy area and for NASA range safety inputs to the Eastern Test Range.

b. Developing criteria for determining hazardous operations at the launch site and securing written approval of MSC and MSFC.

V. PRECEDENCE

This Directive takes precedence over any inter-Center agreements on Apollo program responsibilities.

VI. CONCURRENCE

This Program Directive has been reviewed and concurred in by the Associate Administrator for Manned Space Flight and the Associate Administrator for Organization and Management. Any proposed substantive changes in the responsibilities defined in this document will be submitted for review and concurrence in the same manner.

Question: (Duggan, or anyone else who is knowledgeable about it)

1. The Apollo Program Directive (Nos 33 and 33A) "amplified" NMI 1142.2. However, APD 33 (8 Nov 67) and APD 33A (5 Aug 68) were published after most of the constn had been completed.

2. NMI 1142.2 and its predecessor directives -- the 2-2-9 series -- go back to 1960.

★ were "amplifying" instructions, comparable to those contained in the APDs, issued prior to APD 33 of 8 Nov 67.

IF SO, what form did these instructions take?

IF NOT, How did the people responsible for the Apollo Program at KSC know their responsibilities?

★ 3. Since APD 33 and 33A have the characteristics of a post facto directive, are they really a codification of earlier-issued oral instructions or of miscellaneous written instructions.

IF SO, Did anyone ever so define them

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER
KENNEDY SPACE CENTER, FLORIDA 32899

REPLY TO
ATTN OF: AA-SVO-3(72-11-13)

MEMORANDUM

DEC 1972

TO: Distribution

FROM: AA/Manager, Apollo-Skylab Programs

SUBJECT: Addendum 1 to Apollo Program Directive No. 33A, "Center Responsibilities in the Apollo Program"

The attached Addendum 1 to Apollo Program Directive No. 33A is provided for your information only as there is no impact upon the Center. A copy of my Briefing Note to the Center Director concerning this Addendum is also included.

Robert C. Hock

Robert C. Hock

2 Enclosures

Distribution:
Apollo-Skylab Distribution S

NOV 2 3 1972

Dr. Debus:

SUBJECT: Addendum 1 to Apollo Program Directive No. 33A, "Center Responsibilities in the Apollo Program"

This addendum is being provided to the Directorates for information only, since it pertains solely to the responsibilities of the MSC Apollo/ASTP Program Office. The Manned Spacecraft Center (MSC) is assigned the additional responsibility in the Apollo/Soyuz Test Project for the required interfaces with the USSR Academy of Sciences within the constraints of the relevant agreements.

There is no impact on this Center.

Robert C. Hock

Robert C. Hock

OFFICE OF MANNED SPACE FLIGHT PROGRAM DIRECTIVE	M-D MA 1400.095A (Project)	DATE OCTOBER 5, 1972

APOLLO PROGRAM DIRECTIVE NO. 33A

OCT 5 1972

TO: DISTRIBUTION

FROM: Rocco A Petrone
ROCCO A. PETRONE
APOLLO PROGRAM DIRECTOR

SUBJECT: Addendum 1 to Apollo Program Directive No. 33A
Center Responsibilities in the Apollo Program

I. PURPOSE

This addendum adds the following additional MSC responsibilities in the Apollo Soyuz Test Project to those of APD 33A.

II. US-USSR INTERFACE

The Manned Spacecraft Center (MSC) is responsible for the required interfaces with the USSR Academy of Sciences within the constraints of the relevant agreements. The Apollo Soyuz Test Project Director within the Apollo Spacecraft Program Office at MSC is responsible for working with the USSR Academy of Sciences to implement the project through the use of joint technical working groups. In those areas required for overall program control, the Apollo/ASTP Program Director will be responsible for establishing guidelines within which the MSC Project Director will work with the USSR Academy of Sciences to implement the project. These guidelines will be coordinated as necessary with other NASA elements by the Apollo/ASTP Program Office.